

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

ORDER NO. 92-033

NPDES PERMIT NO. CA0037427

REISSUING WASTE DISCHARGE REQUIREMENTS FOR:

SANITARY DISTRICT NO. 5 OF MARIN COUNTY  
PARADISE COVE TREATMENT PLANT  
MARIN COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (the Board), finds that:

1. Sanitary District No. 5 of Marin County applied for waste discharge requirements and a permit to discharge waste under the National Pollutant Discharge Elimination System (NPDES) by application dated March 5, 1987. Waste Discharge Requirements were issued on May 20, 1987.
2. Sanitary sewers collect sewage from the 18 homes in the area and transport it to the treatment plant, located off of Paradise Drive, about two miles North of the town of Tiburon, in Marin County (see attachment B). The average flow rate in 1991 was 2000 GPD. The plant's rated capacity is 25,000 GPD, but the discharger has determined that the effective capacity is 11,000 GPD. The plant discharges secondary effluent through a 4 -inch diameter outfall which extends about 500 feet from shore.
3. The Paradise Cove Treatment Plant uses an extended aeration process. The treatment units consist of two wetwells, a comminuter, aeration basin and clarifier. The effluent is chlorinated (sodium hypochlorite is used) and dechlorinated. The system has redundancy in terms of blowers and pumps, but there is no redundancy of treatment units (ie aeration tank and clarifier). For this reason repairs and preventative maintenance on these units is difficult. The system does not have back-up power.
4. Another small wastewater treatment plant, run by the Seafirth Estates Company, is located about 1/2 mile northwest of the subdivision and serves a small number of residences at Seafirth Estates. Most other homes in the vicinity have individual septic systems. There have been proposals to sewer the entire eastern Tiburon peninsula at the time when several large undeveloped parcels are developed. The District's Paradise Cove plant would be expanded at that time if the Board approved an increase in discharge capacity. Recently, property owners in the area have again become interested in the possibility of developing their lots and sewerage the area. However, there is no proposal from the discharger at this time for the increase in capacity that such an expansion would require.

5. The discharger is presently governed by waste discharge requirements in Order No. 87-042, which allow discharge into San Francisco Bay.
6. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) in December, 1991. The Basin Plan contains water quality objectives for San Francisco Bay.
7. The beneficial uses of San Francisco Bay in the vicinity of the outfall are:
  - a. Water contact recreation
  - b. Non contact water recreation
  - c. Commercial and sport fishing
  - d. Wildlife habitat
  - e. Preservation of habitat for rare and endangered species
  - f. Estuarine habitat
  - g. Fish Migration and spawning
  - h. Shellfish harvesting
  - i. Navigation
  - j. Industrial process and service supply
8. The Basin Plan prohibits the discharge of any wastewater which has particular characteristics of concern to beneficial uses at any point where wastewater does not receive an initial dilution of at least 10:1.
9. An Operation and Maintenance Manual is maintained by the discharger for purposes of providing plant and regulatory personnel with a source of information describing all equipment, facilities and recommended operation strategies, process control monitoring and maintenance activities. In order to remain a useful and relevant document, this manual should be kept updated to reflect significant changes in plant facilities or activities.
10. This Order serves as an NPDES Permit, adoption of which is exempt from the provisions of Chapter three (commencing with Section 21100) of Division 13 of the Public Resources Code (California Environmental Quality Act) pursuant to Section 13389 of the California Water Code.
11. The Discharger and interested agencies and persons have been notified of the Board's intent to reissue requirements for the existing discharge and have been provided an opportunity for a public hearing and the opportunity to submit their written views and recommendations.
12. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to the provisions of Division 7 of the California Water Code and regulations adopted thereunder, and to the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, that the Discharger shall comply with the following:

A. Discharge Prohibitions

1. The bypass or overflow of untreated or partially treated wastewater to waters of the State, either at the treatment plant or from the collection system or pump stations tributary to the treatment plant, is prohibited.
2. The discharge of average dry weather flows greater than 11,000 gallons per day is prohibited. Average dry weather flow shall be determined over three consecutive dry weather months each year.
3. Discharge of wastewater at any point where it does not receive a minimum initial dilution of 10:1 is prohibited.

B. Effluent limitations

1. Effluent discharged shall not exceed the following limits:

Constituent	Units	Monthly Average	Weekly Average	Daily Maximum	Instantaneous
a. Biochemical Oxygen Demand	mg/l	30	45	60	---
b. Total Suspended Solids	mg/l	30	45	60	---
c. Settleable Matter	ml/l-hr	0.1	---	---	0.2
d. Oil and Grease	mg/l	10	---	20	---
e. Total Chlorine Residual (1)	mg/l	---	---	---	0.0

(1) Requirement defined as below the limit of detection in standard test methods.

2. The monthly average of the biochemical oxygen demand (five-day, 20 degrees centigrade) and suspended solids values, by weight for effluent samples collected during a calendar month shall not exceed 15 percent of the monthly average of the respective values, by weight, for influent samples collected at approximately the same times during the same period (85 percent removal).
3. The pH of the discharge shall not exceed 9.0 nor be less than 6.0.
4. The moving median value for the Most Probable Number (MPN) of total coliform

bacteria in any five (5) consecutive effluent samples shall not exceed 240 MPN per 100 milliliters (240 MPN/100 ml). Any single sample shall not exceed 10,000 MPN/100 ml.

5. The survival of test organisms acceptable to the Board in 96-hour bioassays of the effluent shall be a 90 percentile value of not less than 70 percent survival, based on the ten most recent consecutive samples.
6. Representative samples of the effluent shall not exceed the following limits in micrograms per liter (ug/l): (1)

<u>Constituent</u>	<u>Daily Average(2)</u>	<u>30-Day average</u>
a. Arsenic	360	
b. Cadmium	92	
c. Chromium(VI) (3)	500	
d. Copper	17	
e. Lead	53	
f. Mercury	21	.21
g. Nickel	65	
h. Silver	23	
i. Selenium	50	
j. Zinc	840	
k. Cyanide	10	
l. Phenols	----	300
m. PAHs (4)	150	.31

- (1) These limits are intended to be achieved through secondary treatment and applicable pretreatment programs.
- 2) Average of all flow-weighted samples collected over a 24-hour period.
- (3) The Discharger may at its option meet this limit as total chromium.
- (4) Polynuclear Aromatic Hydrocarbons (PAHs). This limit applies to the summation of the detected levels of the individual constituent PAHs as identified by EPA Method 610 (i.e. Total PAHs). If a discharge exceeds this limit, the concentrations of individual constituents shall be reported.

### C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:

  - a. Floating, suspended, or deposited macroscopic particulate matter or foam;
  - b. Bottom deposits or aquatic growths;
  - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
  - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;
  - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

  - a. Dissolved Oxygen                      5.0 mg/l, minimum.  
  
The median dissolved oxygen concentration for any three consecutive months shall not be less than 80 percent of the dissolved oxygen content at saturation. When natural factors cause lesser concentrations than those specified above, then the discharge shall not cause further reduction in the ambient concentration of dissolved oxygen.
  - b. Dissolved Sulfide                      0.1 mg/l, maximum.
  - c. pH    Variation from normal ambient pH by more than 0.5 pH units.
  - d. Un-ionized Ammonia                0.025 mg/l as N, annual median; 0.16 mg/l as N, maximum.
3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

#### D. SLUDGE HANDLING AND DISPOSAL REQUIREMENTS

1. All sludge treatment, processing, storage or disposal activities under the Discharger's control shall be in compliance with current state and federal regulations.
2. The Board may amend this Order prior to the expiration date if necessary to accommodate changes in applicable state or federal sludge regulations, or changes in the Discharger's sludge management procedures.
3. The Discharger shall notify the Board, in writing, of any significant changes in its sludge disposal practices.
4. Permanent on-site sludge storage or disposal activities are not authorized by this permit. A Report of Waste Discharge shall be filed and the site brought into compliance with all applicable regulations prior to commencement of any such activity by the Discharger.
5. The treatment, processing, storage or disposal of sludge conducted by the Discharger shall not create a condition of pollution or nuisance as defined in Section 13050 (l) and (m) of the California Water Code.
6. The treatment, processing, storage or disposal of sludge by the Discharger shall not cause waste material to be discharged to, or deposited in, waters of the State.
7. Sludge storage facilities under the Discharger's control shall be operated and maintained in such a manner as to provide adequate protection from surface runoff, erosion, or other conditions which would cause drainage from the waste materials to escape from the storage facility site(s).
8. The discharge to the Discharger's sludge storage facilities of waste other than sewage sludge produced by the Discharger's wastewater treatment facility is prohibited.
9. The storage of sludge shall not cause degradation of groundwater.

#### E. Provisions

1. Requirements prescribed by this order supersede the requirements prescribed by Order No. 87-042. Order No. 87-042 is hereby rescinded.
2. Where concentration limitations in mg/l or ug/l are contained in this Permit, the following Mass Emission Limitations shall also apply:

(Mass Emission Limit in lbs/day) = (Concentration Limit in mg/l) x (Actual Flow in million gallons per day averaged over the time interval to which the limit applies).

3. The Discharger shall comply with all sections of this Order immediately upon adoption.
4. The Discharger shall comply with the attached Self-Monitoring Program. The Board's Executive Officer may make minor amendments to this Self-Monitoring Program pursuant to federal regulations (40 CFR 122.63).
5. The Discharger shall comply with the following time schedule for evaluating the redundancy and reliability of the facility and making the improvements necessary to allow repairs and preventative maintenance on the main treatment units.

Task

Completion Date

- |  |               |
|--|---------------|
| a. Submit report evaluating reliability and redundancy of the facility.  | March 1, 1993 |
| b. Submit a timetable, subject to the Executive Officer's approval, for making the necessary improvements and repairs. | March 1, 1993 |
6. The Discharger shall comply with all applicable items of the attached "Standard Provisions and Reporting Requirements" dated December, 1986 including section A.18 concerning bypasses.
  7. In reviewing compliance with the limits of Effluent Limitations B.2 of this Order, the Board will take special note of the difficulties encountered in achieving compliance during periods of high wet weather flow.
  8. The discharger shall employ a plant operator with at least a Grade II certification to supervise operation of the sewage treatment plant, or demonstrate to the Executive Officer's satisfaction that an equivalent level of supervision is being maintained.
  9. The Discharger shall review and update its Operations and Maintenance Manual annually, or in the event of significant facility or process changes, shortly after such changes have occurred. Annual revisions, or letters stating that no changes are needed, shall be submitted to the Regional Board by April 15 of each year.
  10. The Discharger shall review and update by December 31, annually, its contingency plan as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the Discharger has failed to develop and/or implement a contingency plan will be the basis for considering such a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.
  11. This Order expires April 15, 1997. The Discharger must file a Report of Waste Discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as

application for issuance of new waste discharge requirements.

12. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective ten days after the date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objections. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Steven R. Ritchie, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on April 15, 1992.



STEVEN R. RITCHIE  
Executive Officer

Attachments:

Standard Provisions and Reporting  
Requirements, December 1986  
Self-Monitoring Program

[File No. 2158.5021]  
[Originator/LCF]  
[Reviewer/RJC]



CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

FINAL  
SELF-MONITORING PROGRAM  
FOR

SANITARY DISTRICT NO. 5 OF MARIN COUNTY  
PARADISE COVE TREATMENT PLANT  
TIBURON, MARIN COUNTY

CONSISTS OF

PART A

## I. DESCRIPTION OF SAMPLING STATIONS

### A. INFLUENT AND INTAKE

<u>Station</u>	<u>Description</u>
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A-001	At any point in the treatment facilities headworks at which all waste tributary to the system is present and preceding any phase of treatment.
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### B. EFFLUENT

<u>Station</u>	<u>Description</u>
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E-001	At a point in the outfall from the treatment facilities between the point of discharge and the point at which all waste tributary to that outfall is present. (May be the same location as E-001-D.)
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E-001-D	At any point in the disinfection facilities for Waste E-001, at which point adequate contact with the disinfectant is assured.
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### D. LAND OBSERVATIONS

<u>Station</u>	<u>Description</u>
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P-1-n'	Located at the corners and midpoints of the perimeter fenceline surrounding the treatment facilities. (A sketch showing the location of these stations will accompany the initial reports).
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### E. OVERFLOWS AND BYPASSES

<u>Station</u>	<u>Description</u>
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O-1-n'	Bypass or overflows from manholes, thru pump stations or collection system.
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Note: Bypass shall be reported to this Regional Board by telephone immediately after occurrence.

A written report shall be filed with the Board within 5 working days which shall contain information such as quantity involved, location, course of bypass, nature of affects, and corrective measures taken.

## II. SCHEDULE OF SAMPLING, MEASUREMENTS, AND ANALYSIS

- A. The schedule of sampling, measurements and analysis shall be that given as TABLE I.

## III. REPORTING REQUIREMENTS

- A. Self-Monitoring Reports for each quarter shall be submitted quarterly, to be received no later than the 15th day of the following month. The required contents of these reports are specified in section G.4 of Part A.
- B. An annual report covering the previous calendar year shall be submitted to the Regional Board by January 30 of each year. The required contents of the annual report are specified in section G.5 of Part A.
- C. Any overflow, bypass or other significant non-compliance incident that may endanger health or the environment shall be reported according to sections G.1 and G.2 of Part A.

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in the Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board No. 92-033.
2. Is effective on the date shown below.
3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.

  
STEVEN R. RITCHIE  
Executive Officer

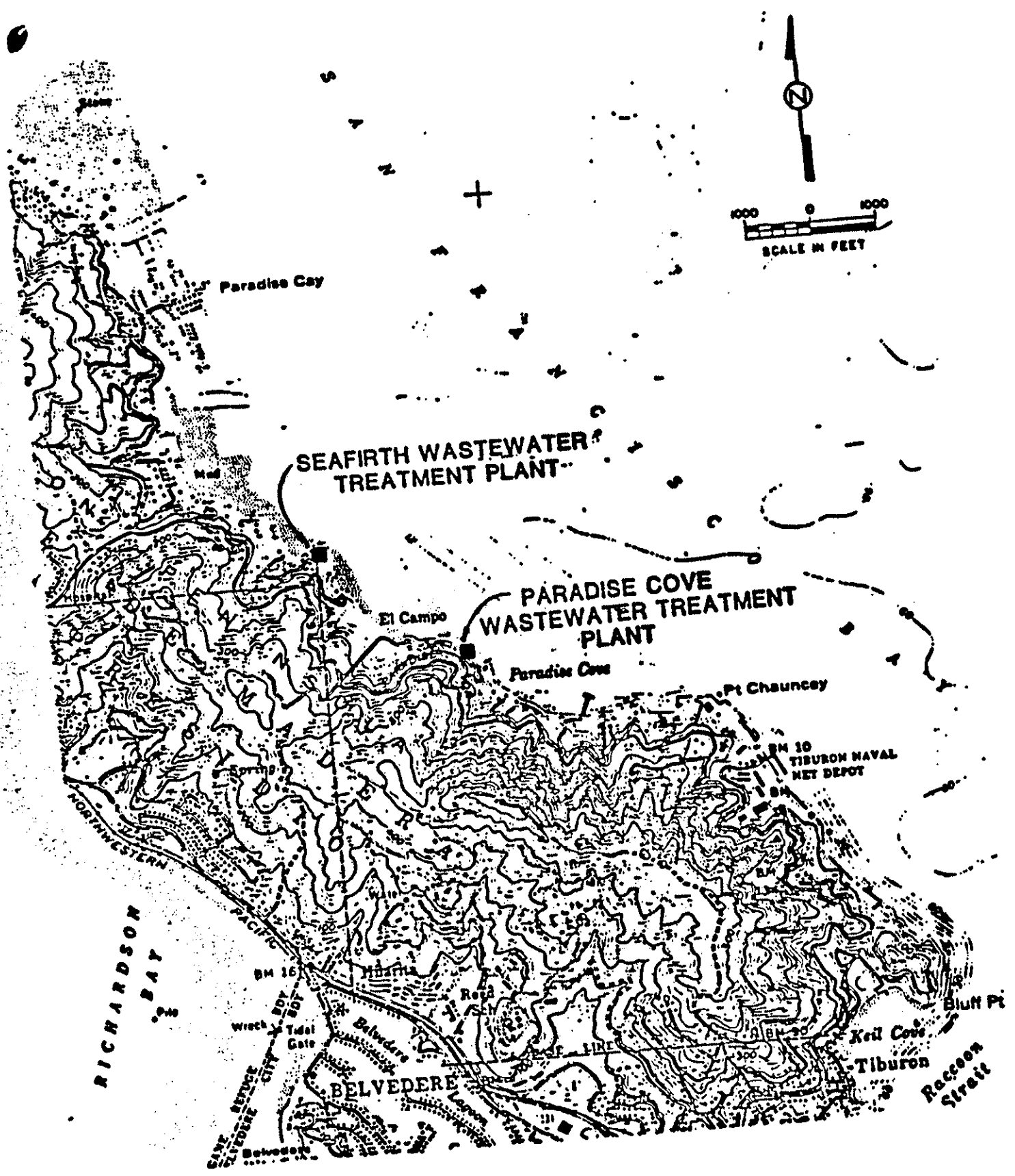
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### TABLE 1

### SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

SAMPLING STATION	A-001	E-001 -
TYPE OF SAMPLE		
Flow Rate (mgd)	D	D
BOD, 5-day, 20°C (mg/l & kg/day)	Q	Q
Total Suspended Solids (mg/l & kg/day)	Q	Q
Settleable Solids (ml/l-hr)	W	W
Oil and Grease (mg/l & kg/day)	1/yr	1/yr
Chlorine Residual, & Dosage (mg/l & kg/day)		D
Coliform, Total (MPN/100 ml)		Q
Toxicity, 96-hr Bioassay (% Survival)		1/yr
Turbidity (NTU)		
PH (units)		D
Temperature (°C)		
Dissolved Oxygen (mg/l & % Saturation)		M
Sulfides, Total & Dissolved (if DO < 2.0 mg/l) (mg/l)		
Arsenic (mg/l or ug/l, & kg/day)		
Cadmium (mg/l or ug/l, & kg/day)		
Chromium (mg/l or ug/l, & kg/day)		
Copper (mg/l or ug/l, & kg/day)		
Lead (mg/l or ug/l, & kg/day)		
Mercury (mg/l or ug/l, & kg/day)		
Nickel (mg/l or ug/l, & kg/day)		
Selenium (mg/l or ug/l, & kg/day)		
Silver (mg/l or ug/l, & kg/day)		
Zinc (mg/l or ug/l, & kg/day)		
Cyanide (mg/l or ug/l, & kg/day)		

LOCATION MAP - PARADISE COVE TREATMENT PLANT



## **APPENDIX B**

# LOCATION MAP - PARADISE COVE TREATMENT PLANT

PARADISE COVE



1-6 MILES

